

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Serial No.

Filing Date

Title

Brittain, Jean H. et al.

09/682,699

10/5/2001

Moving Table MRI with Frequency Encoding in the Z-direction

the Z-direction

Group Art No.

2862

Examiner

Attorney Docket No.

GEMS8081.060

## CERTIFICATION UNDER 37 CFR 1.8(a) and 1.10

I hereby certify that, on the date shown below, this correspondence is being:

Mailing

deposited with the United States Postal Service in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C.

37 CFR 1.8(a)

with sufficient postage as first class mail

37 CFR 1.10

☐As "Express Mail Post Office to Addressee" Mailing Label No.

Transmission transmitted by facsimile to Fax No.:

addressed to Examiner at the Patent and Trademark Office.

Commissioner of Patents and Trademarks

Washington, D.C. 20231

## SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97/99

Dear Sir:

In compliance with Applicants' duty of disclosure as set forth in 37 C.F.R. §1.56, listed on the attached equivalent to Form PTO-1449 are those patents, publications, and other

information known to the Applicant(s) which may be considered material to the patentability of

the claims of the above-captioned application. One copy of each reference is attached.

Applicants would like to make the Examiner aware that the following pending U.S.

patent applications might be considered relevant to the examination of this application:

U.S. Ser. No. 09/292,548 filed April 15, 1999;

U.S. Ser. No. 10/098,013 filed March 13, 2002;

U.S. Ser. No. 09/591,300 filed June 9, 2000;

U.S. Ser. No. 10/063,829 filed May 16, 2002;

U.S. Ser. No. 10/147,701 filed May 17, 2002; and

U.S. Ser. No. 09/595,117 filed June 16, 2000.

The Applicants respectfully request that the documents listed on the attached equivalent

to Form PTO-1449 be considered by the Examiner, that the references be made of record in the

present application, and that an initialed copy of the duplicate equivalent to Form PTO-1449 be

returned to the undersigned in accordance with MPEP 609.

Respectfully submitted,

Reg. No. 48,865

Date: July 26, 2002

P.O. ADDRESS:

Cook & Franke, S.C.

660 East Mason Street

Milwaukee, Wisconsin 53202

(414) 271-5900

PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB

| Substitute | for form 1449A/PT( | )       |        | Complete if Known      |                 |  |
|------------|--------------------|---------|--------|------------------------|-----------------|--|
|            |                    |         |        | Application Number     | 09/682,699      |  |
|            | SUPPLEME           | NTAL    | -      | Filing Date            | 10/5/2001       |  |
| INF        | ORMATION D         | ISCLC   | SURE   | First Named Inventor   | Brittain et al. |  |
| STA        | TEMENT BY          | APPL    | ICANT  | Art Unit               | 2862            |  |
| for        | eo ae manv ehoote  | as nece | ecanil | Examiner Name          |                 |  |
| Sheet      | 1                  | of      | 2      | Attorney Docket Number | GEMS8081.060    |  |

|   | U.S. PATENT DOCUMENTS    |  |                  |                                       |  |  |  |
|---|--------------------------|--|------------------|---------------------------------------|--|--|--|
| <b>-</b>                                | 0.4                      | Document Number                            | Publication Date | Name of Patentee or                   | Pages, Columns, Lines, Where   |  |  |
| Examiner<br>Initials*                   | Cite<br>No. <sup>1</sup> | Number - Kind Code <sup>2</sup> (if known) | MM-DD-YYYY       | Applicant of Cited Documer            | Relevant Passages or Relevant<br>Figures Appear  |  |  |
|   | <u> </u>                 | US-6317620                                 | 11-13-2001       | Ho et al.                             |  |  |  |
|   | İ                        | US-  |                  |                                       |  |  |  |
|   |                          | US-  |                  |                                       |  |  |  |
|   |                          | US-  |                  | <u>ت</u> د.                           |  |  |  |
|   | ļ                        | US-  |                  |                                       |  |  |  |
|   | <u> </u>                 | us-  |                  | 6                                     |  |  |  |
|   |                          | US-  |                  | <b>Z</b> .                            |  |  |  |
| *************************************** | <u> </u>                 | US-  |                  | m e                                   |  |  |  |
|   | <u> </u>                 | US-  |                  | 22                                    |  |  |  |
|   |                          | US-  |                  | (C)                                   |  |  |  |
|   |                          | US-  |                  | 80                                    |  |  |  |
|   |                          | US-  |                  |                                       |  |  |  |
|   |                          | US-  |                  |                                       |  |  |  |
|   |                          | US-  |                  |                                       | the state of the s |  |  |
|   |                          | US-  |                  |                                       |  |  |  |
|   | İ                        | US-  |                  |                                       |  |  |  |
|   |                          | US-  |                  |                                       |  |  |  |
|   |                          | US-  |                  |                                       |  |  |  |
|   |                          | US-  |                  |                                       |  |  |  |
|   | 1                        |  |                  | · · · · · · · · · · · · · · · · · · · | 1  |  |  |

|                       | FOREIGN PATENT DOCUMENTS |  |                                |  |   |          |
|-----------------------|--------------------------|--|--------------------------------|--|---|----------|
| Examiner<br>Initials* | Cite<br>No.1             | Foreign Patent Document  Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known) | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>or Relevant Figures Appear | т°       |
|                       |                          |  |                                |  |   | $\vdash$ |
|                       |                          |  |                                |  |   | -        |
|                       |                          |  |                                |  |   | -        |
| ****                  |                          |  |                                |  |   | -        |
|                       |                          |  |                                |  |   |          |
|                       |                          |  |                                |  |   |          |

|           |            | _ |
|-----------|------------|---|
| Examiner  | Date       | Ī |
| Signature | Considered |   |

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation in not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). \*See Kinds Codes of USPTO Patent Documents at <a href="www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. \*Better Office that issued the document, by the two-letter code (WIPO Standard ST.3). \*For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \*Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. \*Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP.609. Draw line through citation if not in conformance and not

Dubstitute for form 1449B/PTO

## **SUPPLEMENTAL INFORMATION DISCLOSURE** STATEMENT BY APPLICANT

(use as many sheets as necessary)

2 2 of Sheet

| Complete if Known      |                      |  |  |  |  |  |
|------------------------|----------------------|--|--|--|--|--|
| Application Number     | 09/682,699           |  |  |  |  |  |
| Filing Date            | 10/5/2001            |  |  |  |  |  |
| First Named Inventor   | Brittain et al. = 70 |  |  |  |  |  |
| Group Art Unit         | 2862                 |  |  |  |  |  |
| Examiner Name          | 067<br>067           |  |  |  |  |  |
| Attorney Docket Number | GEMS8081.060         |  |  |  |  |  |

|  |                          | <u> </u>  |              |
|--|--------------------------|---|--------------|
|  |                          | OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS  Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the   |              |
| Cynesia  |                          | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the  | 2 ا          |
| Examiner<br>Initials*  | Cite <sub>1</sub><br>No. | ilem (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue   | '            |
| -  | -                        | number(s), publisher, city and/or country where published.  | +-           |
|  | C1                       | Moran, PR. A flow velocity zeugmatographic interface for NMR imaging in humans. Magnetic Resonance Imaging 1982; 1: 197-203.  |              |
| ***************************************  | C2                       | Bryant DJ, Payne JA, Firmin DN, and Longmore DB. Measurement of flow with NMR imaging using a gradient pulse and phase difference technique. J Comput Assist Tomogr 1984; 8: 588-93.  |              |
|  | СЗ                       | Van Dijk P. Direct cardiact NMR imaging of heart wall and blood flow velocity. J. Comput Assist Tomogr 1984; 8: 429-36.   | <del> </del> |
|  | C4                       | Nayler GL, Firmin DN, and Longmore DB. Blood flow imaging by cine magnetic resonance. J Comput Assist Tomogr 1986; 10: 715-22.  |              |
|  | C5                       | Swan JS, Grist TM, Weber DM, Sproat IA, and Wojtowycz MM. MR angiography of the pelvis with variable velocity encoding and a phase-array coil. <i>Radiology</i> 1994; 190: 363-9.   |              |
|  | C6                       | Swan JS, Weber DM, Grist TM, Wojtowycz MM, Korosec FR, and Mistretta CA. Peripheral MR angiography with variable velocity encoding. Work in progress. <i>Radiology</i> 1992; 813-7.   |              |
| ACTION TO BE STORES THE CONTROL OF T | C7                       | Ehman RL, Felmlee JP. Adaptive technique for high definition MR imaging of moving structures.<br>Radiology 1998; 173: 255-263.  |              |
|  | C8                       | Ho KY, Leiner T, de Haan MW, Kessels AG, Kitslaar PF, and van Engelshoven JM. Peripheral vasculature tree stenoses: evaluation with moving-bed infusion-tracking MR angiography. <i>Radiology</i> 1998; 206: 683-92.  |              |
| 4440 (444)   | C9                       | Meaney JF, Ridgway JP, Chakraverty S, Robertson I, Kessel D, Radjenovic A, Kouwenhoven M, Kassner A, and Smith MA. Stepping-table gadolinium-enhanced digital subtraction MR angiography of the aorta and lower extremity arteries; preliminary experience. <i>Radiology</i> 1999; 211: 59-67.      |              |
|  | C10                      | Foo, TKF, Saranathan M, Prince MR, and Chenevert TL. Automated detection of bolus arrival and initiation of data acquisition in fast, three-dimensional, gadolinium-enhanced MR angiography. Radiology 1997; 203: 275-80.   |              |
|  | C11                      | Wilman AH, Riederer SJ, Huston J. 3 <sup>rd</sup> , Wald JT, and Debbins JP. Arterial phase carotid and vertebral artery imaging in 3D contrast-enhanced MR angiography by combining fluoroscopic triggering with an elliptical centric acquisition order. <i>Magn. Reson Med.</i> 1998; 40: 24-35. |              |
|  | C12                      | Riederer SJ, Fain SB, Kruger DG, and Busse RF. 3D-enhanced MR angiography using fluoroscopic triggering and an elliptical centric view order. <i>Int. J. Card Imaging</i> 1999; 15: 117-29.   |              |
|  | C13                      | Prince MR, Chenevert TL, Foo TKF, Londy FJ, Ward JS, Maki JH. Contrast enhanced abdominal MR angiography: Optimization of imaging delay time by automating the detection of contrast material arrival in the aorta. <i>Radiology</i> 1997; 203: 109-114.  |              |
|  | C14                      | Meany, Dr. James FM, Leeds General Infirmary, Leeds UK Moving Bed MRA, The Future of Peripheral Arteriography? <i>Phillips</i>  |              |
|  | C15                      | Kouwenhoven, M., MRA with moving bed imaging, IX International Workshop on Magnetic Resonance Angiography and Introductory Course "New Horlzons on MRA and CTA", Valencia, October 7-11, 1997, Book of Abstracts, <i>The MR Angio Club</i> , p. 158.  |              |
|  | C16                      | Kruger, DG., Riederer, S.J., Grimm, R.C., Rossman, P.J., Continuously moving table data acquisition method for long FOV contrast-enhanced MRA and whole-body MRI. Magnetic Resonance in Medicine, 47: 224-231 (2002)  |              |

| Examiner   | Date       |  |
|------------|------------|--|
| LAGITITIES | Date       |  |
| Signature  | Considered |  |